

## CAN A MACHINE REALLY THINK?

*Text by Karl Milde*

June was Artificial Intelligence (AI) month at Heritage Hills. On June 10 the Continuing Education Committee presented a lecture on AI by Dr. John Patrick, former VP of Internet Technology at IBM; on June 11 the Ten-A-Men Club presented a lecture on AI by Dr. Satish Gambhir; and on June 20 Ami Stokhamer and I presented two TED Talks about AI. If you attended all three presentations, you would have learned an awful lot on the subject – too much to remember – when all you really wanted to know was: Can machines “think.” The answer... (drumroll please)...is “yes.”

This depends, of course, on what you mean by thinking. If you mean “remembering,” computers have it all over human beings. They remember everything – perfectly, and for a very long time. If you mean “creating,” computers can now do that too. Not long ago you had to train a computer what to look for – the difference between a dog and a cat, say, or the difference between the letters “A” and “H” no matter how sloppily they’re written. But computers can now do that too.

Let’s say we detect a radio signal coming from outer space. In the past we had to tell the computer what to look for in the way of intelligence. Look for the signal’s frequencies, look for changes in these frequencies – whatever – to determine if someone from another planet were sending us a message. With our current AI, a computer can look at the signal and, *without us telling it what to look for*, determine whether the signal includes a message and, if so, decypher the message. In other words, the AI computer has taught itself to “think.”

How can computers can do that? We humans have found out how our brains work and have built computers that work the same way. Whatever we can do, computers can do also, and they can do it much faster.

Don't expect that, in the future, humans will remain superior in the way we think. Computers are smart now, and they're getting smarter every day. In the next decade, they will overtake many of our professions that require thinking – creating art, creating music, creating stories, creating articles on any subject, and creating *new ideas*.

Because they can think more quickly than we humans do, computers will be used for operating things – construction equipment, manufacturing machines, driving trucks and cars, and flying airplanes. They will also be used for guiding missiles to their targets, and deciding when to fire them. In other words, fighting wars.

Because of these “advances” in AI, our lives will be different in the future. It surely will be interesting to see what happens in this brave new world.